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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/800,645	03/07/2001	Troy Michael Runge	16,670	5221

23556 7590 12/07/2007
KIMBERLY-CLARK WORLDWIDE, INC.
Catherine E. Wolf
401 NORTH LAKE STREET
NEENAH, WI 54956

EXAMINER

HALPERN, MARK

ART UNIT	PAPER NUMBER
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1791

MAIL DATE	DELIVERY MODE
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12/07/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/800,645
Filing Date: March 07, 2001
Appellant(s): RUNGE ET AL.

MAILED
DEC 07 2007
GROUP 1700

Gregory E. Croft
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 9/7/2007 appealing from the Office action mailed 1/18/2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

None

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,547,541	HANSEN	8-1996
3,556,931	CHAMPAIGNE	1-1971

Saint-Cyr, K. "Adsorption Kinetics of Dyes and Yellowing Inhibitors on Pulp Fibers, Master of Engineering Thesis, McGill University, Montreal, Canada, June 1999

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 4-5, 8-19, 22-23, 25, 27-33, 77-79, are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious

over Hansen (5,547,541) with or without Saint-Cyr, (Adsorption Kinetics of Dyes and Yellowing Inhibitors on Pulp Fibers, Master of Engineering Thesis, McGill University, Montreal, Canada, June 1999)

Claims 1-2, 4-5, 14, 17-18, 22-23, 25, 27: Hansen discloses sequentially spraying a non-polymeric or polymeric binder and water insoluble superabsorbent onto the surface of a dewatered and dried web as shown in a paper machine in Figure 1 and discloses chemicals listed in columns 19-20. The treated sheet is then fiberized to form absorbent non-woven products. The sprayed additives in Hansen are chemically bound to the fibers by covalent or ionic bonds and are inherently retained in the claimed range between about 10% to about 100% in the sheet when exposed to a liquid, water, and thus anticipate or it would have been obvious, to one skilled in the art at the time the invention was made, show the claimed invention. The present Specification (Background of the Invention, Pgs. 1-2) discloses adsorption of chemical additives by a web onto web fibers and discloses that the adsorption follows Langmuir kinetics. The Specification also recites that "...the adsorption of water soluble or water dispersible chemical additives may be significantly less than 100 percent,...". Saint-Cyr performed surface adsorption tests finding that chemical adsorption on the surface of fibers is following Langmuir kinetics. Saint-Cyr further performed desorption tests by taking the web containing chemical additives adsorbed by the web fibers and placing said web in water and concluded that adsorption is irreversible (Saint-Cyr, Section 4.2, pg. 45, Section 4.2, pg. 83). Desorption does not follow Langmuir kinetics. Langmuir kinetics assumes that adsorption is reversible. Desorption is following Donnan

equilibrium (Saint-Cyr, Conclusions, pgs. 55-58, pgs. 95-98, pgs. 102-103), desorption being irreversible due to ionic bonding between the chemical additive and fibers. The tests of Saint-Cyr thus support the concept that the sprayed additives are chemically bound to the fibers by covalent or ionic bonds and are inherently retained by the fibers when exposed to a liquid.

Claims 8-13, 33: the chemical additives are softening agents (Abstract). Polyhydroxy compounds are disclosed (col. 27, lines 35-50). Absorbency agents are disclosed (col. 42, lines 14-20). Strength agents are disclosed (col. 42, lines 46-52).

Claims 15, 29-32, 77-79: the amount of chemical additive is disclosed in the Examples.

Claims 16-17: dried fiber consistency is disclosed between 90 and 92 percent (col. 8, lines 35-45).

Claim 19; tissue forming is disclosed (col. 35, lines 19-32).

Claim 28: paper product enhanced quality is disclosed (Abstract).

Claims 3, 6, 24, 26, are rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen in view of Champaigne (3,556,931). Hansen is applied as above for claims 1, 22, Hansen is silent on a z-direction gradient of the chemical additive. Champaigne discloses a process of making a cellulosic fluffed sheet, wherein a quaternary ammonium salt is added to the web in such a way as to penetrate only the surface zone of the web and thus create a gradient of chemical additive penetration into the web (Champaigne, col. 1, lines 13-27, and col. 1, line 64 to col. 2, line 19). It would have been obvious, to one skilled in the art at the time the invention was made, to

combine the teachings of Hansen and Champaigne, because such a combination would create a product of Hansen having a dense absorbent inner zone and a softer more fluid outer zone, as disclosed by Champaigne (col. 1, lines 25-27).

(10) Response to Argument

In response to the Applicants alleging that Hansen and Saint-Cyr do not disclose the invention, Saint-Cyr supports Hansen. Saint-Cyr performed surface adsorption tests finding that chemical adsorption on the surface of fibers is following Langmuir kinetics. Saint-Cyr further performed desorption tests by taking the web containing chemical additives adsorbed by the web fibers and placing said web in water and concluded that adsorption is irreversible. Desorption does not follow Langmuir kinetics. Langmuir kinetics assumes that adsorption is reversible. Desorption is following Donnan equilibrium, desorption being irreversible due to ionic bonding between the chemical additive and fibers. The tests of Saint-Cyr thus support the concept that the sprayed additives are chemically bound to the fibers by covalent or ionic bonds and are inherently retained by the fibers when exposed to liquid, water.

In regard to the dependent claims, the chemical additives as softening agents are disclosed. Polyhydroxy compounds are disclosed. Absorbency agents are disclosed. Strength agents are disclosed. The amount of chemical additive is disclosed in the Examples. Dried fiber consistency is disclosed between 90 and 92 percent. Tissue forming is disclosed. The paper product enhanced quality is disclosed.

In regard to claims 3, 6, 24, 26, rejection under 35 U.S.C. 103(a) as being unpatentable over Hansen in view of Champaigne, Hansen is silent on a z-direction

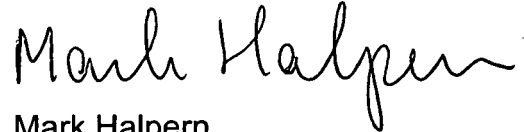
gradient of the chemical additive. Champaigne discloses a process of making a cellulosic fluffed sheet, wherein a quaternary ammonium salt is added to the web in such a way as to penetrate only the surface zone of the web and thus create a gradient of chemical additive penetration into the web. It would have been obvious, to one skilled in the art at the time the invention was made, to combine the teachings of Hansen and Champaigne, because such a combination would create a product of Hansen having a dense absorbent inner zone and a softer more fluid outer zone, as disclosed by Champaigne.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



Mark Halpern

Primary Examiner

Art Unit 1791

Conferees:

Steven Griffin

Patrick Ryan

